

## Claims

1. A method implemented by a push-to-talk wireless mobile terminal for communicating voice information comprising the steps of:

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determining if a request to send a delayed delivery voice message has been made;

if said determining step determines that a request to send a delayed delivery voice message has been made, transmitting an indicator to a communication application server representing an instruction that packets received from the mobile terminal are to be stored for later delivery to a destination Pal;

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encoding audio input from a user by the mobile terminal into the packets following the determining step;

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transmitting the packets to the communication application server for later delivery to the destination Pal.

20 2. The method of claim 1 wherein the step of determining if a request to send a delayed delivery voice message has been made comprises sensing that the destination Pal selected by the user to receive the audio input is not available prior to the user initiating the encoding step.

25 3. The method of claim 2 wherein the step of sensing that the Pal selected by the user as the destination party to receive the audio input is not available comprises the step of determining a current status of the selected Pal stored in the mobile terminal, where the status represents that the selected Pal is not available to receive communications.

30 4. The method of claim 1 wherein the step of determining if a request to send a delayed delivery voice message has been made comprises determining that an input signal is entered by the user where the input signal represents a request to send said packets as a delayed delivery voice message regardless of whether or not the destination Pal selected to receive the packets is currently available to receive communications.

5. The method of claim 1 wherein the step of transmitting an indicator to a communication application server representing an instruction that the packets are to be stored for later delivery to a destination Pal causes the audio carried by the packets to be stored in the communication application server.

6. The method of claim 5 wherein the instruction further conveys to the communication application server that the packets are not to be attempted to be delivered in real-time to the destination Pal.

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7. The method of claim 1 wherein the step of determining if a request to send a delayed delivery voice message has been made comprises the steps of generating a first request for a real-time voice communication to the destination Pal in response to the push-to-talk button being pressed, providing a first alert to the user indicating that a real-time voice communication to the destination Pal is not available, and sensing a second request to initiate communications to the destination Pal by the push-to-talk button being depressed again following the alert having been provided to the user.

8. The method of claim 7 wherein the step of sensing the second request includes sensing the push-to-talk button being depressed again within a predetermined time interval of the first request.

9. The method of claim 7 further comprising the step of providing a second alert to the user in response to the second request wherein the second alert comprises a predetermined talk-beep associated with the request to send a delayed delivery voice message, the predetermined talk-beep comprising an audible alert that is different from an audible alert associated with the initiation of a real-time voice communication.

10. A push-to-talk wireless mobile terminal for communicating voice information comprising:

means for determining if a request to send a delayed delivery voice message has been made;

means for transmitting an indicator to a communication application server representing an instruction that packets received from the mobile terminal are to be stored for later delivery to a destination Pal if said determining means determines that a request to send a delayed delivery voice message has been made;

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means for encoding audio input from a user by the mobile terminal into the packets following the determining step;

means for transmitting the packets to the communication application server for later delivery to the destination Pal.

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11. The mobile terminal of claim 10 wherein the means for determining comprises means for sensing that the destination Pal selected by the user to receive the audio input is not available to receive real-time communications.

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12. The mobile terminal of claim 11 wherein the means for sensing comprises means for determining a current status of the selected Pal stored in the mobile terminal, where the status represents that the selected Pal is not available to receive communications.

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13. The mobile terminal of claim 10 wherein the means for determining if a request to send a delayed delivery voice message has been made comprises means for determining that an input signal is entered by the user where the input signal represents a request to send said packets as a delayed delivery voice message regardless of whether or not the destination Pal selected to receive the packets is currently available to receive communications.

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14. The mobile terminal of claim 10 wherein the means for transmitting an indicator to a communication application server representing an instruction that the packets are to be stored for later delivery to a destination Pal causes the audio carried by the packets to be stored in the communication application server.

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15. The mobile terminal of claim 14 wherein the instruction transmitted by the means for transmitting further conveys to the communication application server that the packets are not to be attempted to be delivered in real-time to the destination Pal.

16. The mobile terminal of claim 10 wherein the means for determining if a request to send a delayed delivery voice message has been made comprises means for generating a first request for a real-time voice communication to the destination Pal in response to the push-to-talk button being pressed, means for providing a first alert to the user indicating that a real-time voice communication to the destination Pal is not available, and means for sensing a second request to initiate communications to the destination Pal by the push-to-talk button being depressed again following the alert having been provided to the user.

17. The mobile terminal of claim 16 wherein the means for sensing the second request includes means for sensing the push-to-talk button being depressed again within a predetermined time interval of the first request.

18. The mobile terminal of claim 16 further comprising means for providing a second alert to the user in response to the second request, the second alert comprises a predetermined talk-beep associated with the request to send a delayed delivery voice message, the predetermined talk-beep comprising an audible alert that is different from an audible alert associated with the initiation of a real-time voice communication.

19. A method implemented by a push-to-talk wireless mobile terminal for communicating voice information comprising the steps of:

displaying a list of Pals of the first user including visual indicia representing that a previously transmitted voice message by the first user to a first Pal is stored and awaits delivery to the first Pal;

determining if a request has been made by the first user to access the stored voice message;

if said request is determined to have been made, discerning the type of access desired by the first user;

transmitting a command to a communication application server at which the voice messages stored where the command conveys instructions to the communication application server to implement action based on the type of access desired by the first user.

5     20.     The method of claim 19 wherein the step of discerning comprises discerning that the stored voice message is to be played back to the first user and wherein the transmitted command conveys instructions to the communication application server to implement transmission of the stored voice message to the first user, the method further comprising the step of receiving at the mobile terminal of the first user the stored voice message previously  
10     transmitted by the first user to the first Pal and audibly playing the stored voice message.

21.     The method of claim 19 wherein the step of discerning comprises discerning that the stored voice message is to be deleted and wherein the transmitted command conveys instructions to the communication application server to delete the stored voice message  
15     previously transmitted by the first user to the first Pal, the method further comprising the step of receiving at the mobile terminal of the first user a signal technology that the stored voice message has been deleted.

22.     A push-to-talk wireless mobile terminal for communicating voice information  
20     comprising:

means for displaying a list of Pals of the first user including visual indicia representing that a previously transmitted voice message by the first user to a first Pal is stored and awaits delivery to the first Pal;

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means for determining if a request has been made by the first user to access the stored voice message;

means for discerning the type of access desired by the first user if said request is  
30     determined to have been made;

means for transmitting a command to a communication application server at which the voice messages are stored where the command conveys instructions to the communication application server to implement action based on the type of access desired by the first user.

23. The mobile terminal of claim 22 wherein the means for discerning discerns that the stored voice message is to be played back to the first user and wherein the means for transmitting transmits the command that conveys instructions to the communication application server to implement transmission of the stored voice message to the first user, the mobile terminal further comprising means for receiving, at the mobile terminal of the first user, the stored voice message previously transmitted by the first user to the first Pal and audibly playing the stored voice message.

24. The mobile terminal of claim 22 wherein the means for discerning discerns that the stored voice message is to be deleted and wherein the means for transmitting transmits the command that conveys instructions to the communication application server to delete the stored voice message previously transmitted by the first user to the first Pal, the mobile terminal further comprising means for receiving at the mobile terminal of the first user a signal representing that the stored voice message has been deleted.

25. A method implemented by a push-to-talk wireless mobile terminal for communicating voice information comprising the steps of:

displaying a list of Pals including visual indicia of whether a voice message is waiting for delivery from a Pal;

determining if a request to receive a waiting voice message has been initiated by a user of the mobile terminal;

if said request is determined to have been made, transmitting at least one packet to a communication application server requesting that the waiting voice message associated with a selected Pal be delivered to the user's mobile terminal;

receiving packets at the user's mobile terminal from the communication application server containing the waiting voice message and playing the message to the user.

26. The method of claim 25 wherein the steps of determining if the request has been made comprises sensing that a Pal is selected by the user where the Pal has corresponding visual indicia indicating that a voice message from the Pal is waiting delivery to the user, and sensing an input initiated by the user representing a request to receive delivery of the voice message corresponding to the selected Pal.

27. The method of claim 26 further comprising the steps of receiving a status update following receiving the packets where the status update indicates that there is no longer the voice message from the Pal waiting delivery to the user and updating the visual indicia corresponding to the Pal whose voice message was received to show another visual indicia representing that the voice message is no longer waiting delivery to the user.

28. A push-to-talk wireless mobile terminal for communicating voice information comprising:

means for displaying a list of Pals including visual indicia of whether a voice message is waiting for delivery from a Pal;

means for determining if a request to receive a waiting voice message has been initiated by a user of the mobile terminal;

means for transmitting at least one packet to a communication application server requesting that the waiting voice message associated with a selected Pal be delivered to the user's mobile terminal if said request is determined to have been made;

means for receiving packets at the user's mobile terminal from the communication application server containing the waiting voice message and playing the message to the user.

29. The mobile terminal of claim 28 wherein the means for determining if the request has been made comprises means for sensing that a Pal is selected by the user where the Pal has corresponding visual indicia indicating that a voice message from the Pal is waiting delivery to the user, and means for sensing an input initiated by the user representing a request to receive delivery of the voice message corresponding to the selected Pal.

30. The mobile terminal of claim 29 further comprising means for receiving a status update following receiving the packets where the status update indicates that there is no longer the voice message from the Pal waiting delivery to the user and means for updating the visual indicia corresponding to the Pal whose voice message was received to show another  
5 visual indicia representing that the voice message is no longer waiting delivery to the user.

31. A method implemented by a communication application server in a packet communication network for processing communications comprising the steps of:  
10 receiving a first packet from a mobile terminal of a user;  
  
determining if the first packet contains an indicator representing an instruction to process any following voice packets as a delayed delivery voice message;  
  
15 receiving a set of voice packets from a mobile terminal of a user;  
if said determining step determines that said indicator is present, storing at least payloads of the voice packets of said set in memory and labeling the stored payloads as addressed to a destination Pal identified by said set of packets.

20 32. The method of claim 31 further comprising the step of attempting to deliver voice information contained in said payloads only upon receiving a command from a mobile terminal of the destination Pal where the command corresponds to input initiated by the Pal to retrieve the stored voice information.

25 32. The method of claim 31 further comprising the steps of generating a status update following the storing step and transmitting the status update to at least the mobile terminals of the destination Pal and the user.

30 33. The method of claim 32 wherein the step of transmitting the status update comprises transmitting a status update to the destination Pal indicating that the voice information from the user is awaiting deliver to the destination Pal and transmitting a status update to the user indicating that the voice information from the user to the destination Pal is still awaiting delivery to the destination Pal.



34. The method of claim 32 further comprising the step of receiving said command from the mobile terminal of the destination Pal, retrieving the at least voice information payloads, encoding the at least voice information payloads into further packets addressed to the destination Pal, and transmitting the further packets to the destination Pal.

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35. The method of claim 34 further comprising the steps of generating a status update following the transmitting of the further packets and transmitting the status update to at least the mobile terminals of the destination Pal and the user, where the status update represents that the voice information has been delivered to the destination Pal.

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36. The method of claim 35 wherein the step of transmitting the status update comprises transmitting a status update to the destination Pal indicating that there is no longer the voice information from the user awaiting deliver to the destination Pal and transmitting a status update to the user indicating that there is no longer the voice information from the user awaiting delivery to the destination Pal.

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37. A communication application server in a packet communication network for processing communications comprising:

means for receiving a first packet from a mobile terminal of a user;

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means for determining if the first packet contains an indicator representing an instruction to process any following voice packets as a delayed delivery voice message;

means for receiving a set of voice packets from a mobile terminal of a user;

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means for storing at least payloads of the voice packets of said set in memory and labeling the stored payloads as addressed to a destination Pal identified by said set of packets if said determining step determines that said indicator is present.

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38. The communication application server of claim 37 further comprising means for attempting to deliver voice information contained in said payloads only upon receiving a command from a mobile terminal of the destination Pal where the command corresponds to input initiated by the Pal to retrieve the stored voice information.

39. The communication application server of claim 37 further comprising means for generating a status update following the storage of the at least payloads and means for transmitting the status update to at least the mobile terminals of the destination Pal and the user.

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40. The communication application server of claim 39 wherein the means for transmitting the status update comprises means for transmitting a status update to the destination Pal indicating that the voice information from the user is awaiting delivery to the destination Pal and means for transmitting a status update to the user indicating that the voice information from the user to the destination Pal is still awaiting delivery to the destination Pal.

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41. The communication application server of claim 39 further comprising means for receiving said command from the mobile terminal of the destination Pal, means for retrieving the at least voice information payloads, means for encoding the at least voice information payloads into further packets addressed to the destination Pal, and means for transmitting the further packets to the destination Pal.

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42. The communication application server of claim 41 further comprising means for generating a status update following the transmitting of the further packets and means for transmitting the status update to at least the mobile terminals of the destination Pal and the user, where the status update represents that the voice information has been delivered to the destination Pal.

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43. The communication application server of claim 42 wherein the means for transmitting the status update comprises means for transmitting a status update to the destination Pal indicating that there is no longer the voice information from the user awaiting deliver to the destination Pal and means for transmitting a status update to the user indicating that there is no longer the voice information from the user awaiting delivery to the destination Pal.

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